

2nd Forward Physics Facility Meeting

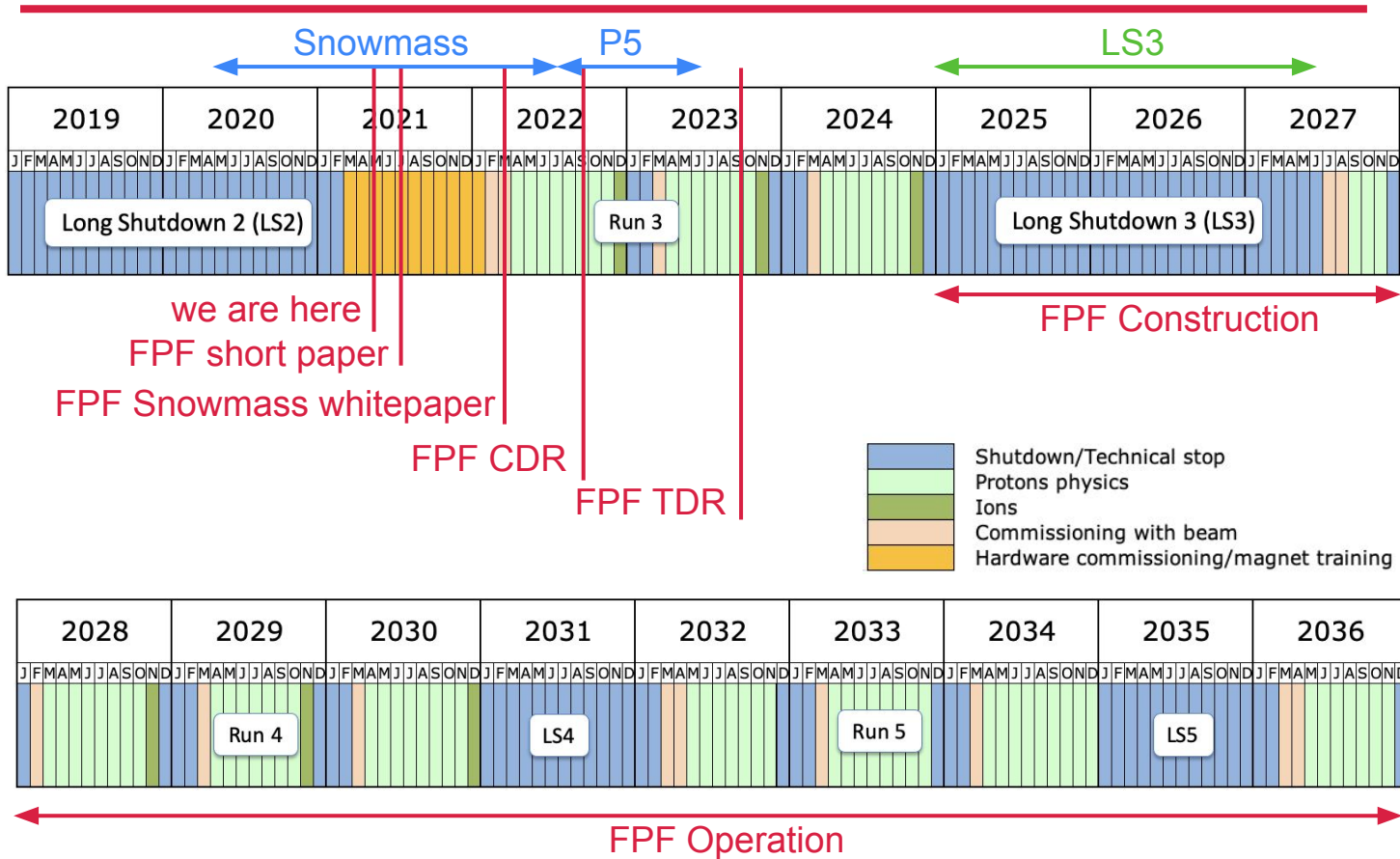
Next Steps and Publication Plans

Felix Kling



NATIONAL
ACCELERATOR
LABORATORY

FPF Timeline



FPF Short Paper

Idea: first real paper on FPF, to be submitted to arXiv and journal, summary of ideas and reference for further studies

The FPF is a community effort, so your opinion and contribution matters!
Please let us know your thoughts and your willingness to contribute!

We created a google form **google form** to sign up as author and to express interest to contribute to writing or editing:

https://docs.google.com/forms/d/e/1FAIpQLSdBDNn5UIZjN9xv3a7ZnW5uKIJ8Q0W3sk-M7NkE3-Kbwz1QFA/viewform?usp=sf_link

Proposed Timeline

05/27-07/01: community contributions

07/01-07/14: editing by editors

07/14-07/21: draft send to community
for feedback

end of July: draft to be submitted

FPF Short Paper - Author List

To be added to the author list, please fill out the form below. The current version of the paper draft is available at <https://www.overleaf.com/read/2wpyvtyqy9k>.

*** Erforderlich**

name *
Example: Samuel L. Jackson
Meine Antwort _____

affiliation *
Example: Department of Physics, University of Washington, Seattle, WA 98195-1560, USA
Meine Antwort _____

email address *
Once editing has finished, we will send it to all authors for feedback and comments before submitting the paper.
Meine Antwort _____

If you would like to contribute to the writing, please let us know.
 Yes

If yes, please select all sections that you would like to contribute to.
 Facility / Civil Engineering
 Experiments

FPF Short Paper

Proposed Content

everyone interested in FPF physics
and all FPF workshop participants are
invited to be author and to contribute

outline concept / location of the FPF

proposed experiments and
benchmarks for further studies

short outline of the physics potential for
BSM physics (EF08-EF10)
Neutrino Physics (NF)
QCD and SM Physics (EF05-EF07)
Astroparticle Physics (CF7)

for more details, visit the [draft on overleaf](#)

The Forward Physics Facility

Jonathan L. Feng,¹ Felix Kling,² and Maria Vittoria Gazell³

¹*Department of Physics and Astronomy, University of California, Irvine, CA 92697-4575, USA*

²*Theory Group, SLAC National Accelerator Laboratory, Menlo Park, CA 94025, USA*

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Backup

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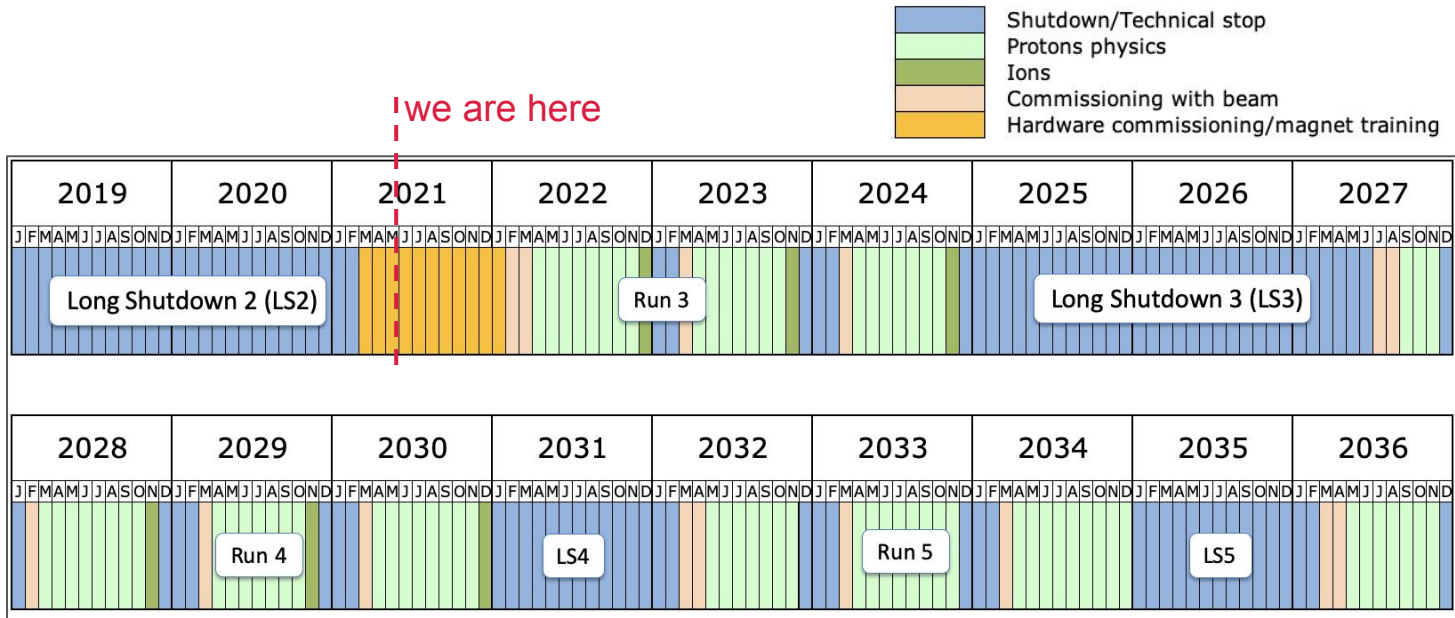
Yesterday's Slides

FPF Timeline

FPF timeline depends on LHC schedule

FPF construction during LS3 (2025 - 2027)

FPF plans need to be incorporated into LS3 planning before that



FPF Timeline

FPF study also part of the [Snowmass community planning process](#).

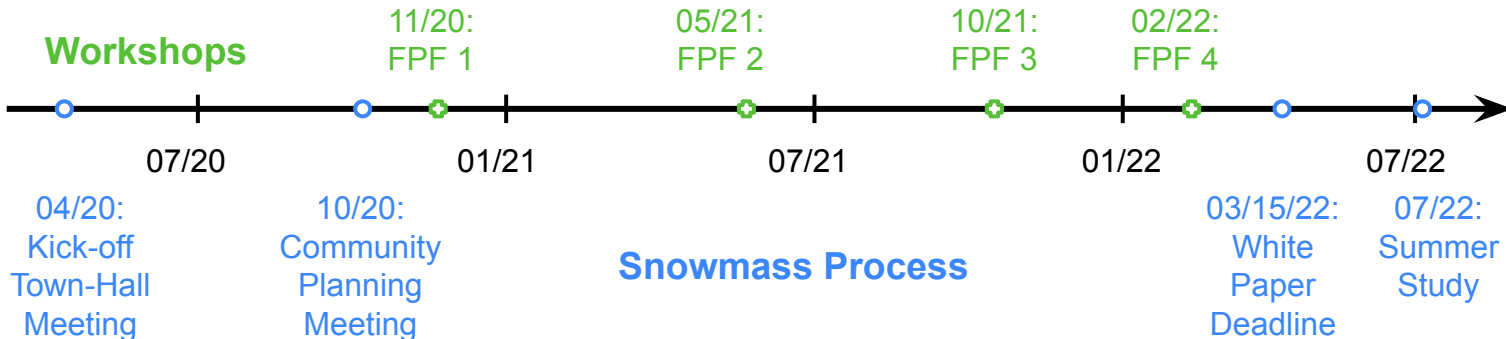
Due to acceleration in the FPF planning activities, we propose the following dates for the next workshops:

3rd FPF Meeting: Oct.25/26th 2021

4th FPF Meeting: Jan. 31st / Feb 1st 2022

FPF4 would focus on white paper discussion

Please let us know about any possible conflicts.



FPF Timeline

DOI: 10.1093/oxford/obz061

29 September 2020

SNOWMASS 2021 LETTER OF INTEREST FORWARD PHYSICS FACILITY

Rohan M. Abraham,¹ Hirono Aoki,² Yoon Aik³, Saugha N. Aggarwal,⁴ Juliette Alimena,⁵ Luis Ambrogio,⁶ Claire Amélie⁷, Akhila Ariga,⁸ Timon Arfa⁹, G. Ariga,¹⁰ A. Argüelles,¹¹ Yooni Aze,¹² Weidong Bai,¹³ Pooja Baheti,¹⁴ Akih B. Baldissera,¹⁵ Victor Balitski,¹⁶ Brian Ballew,¹⁷ James Beacom,¹⁸ John P. Bercow,^{19, 20} Nicole F. Bell,²¹ Felice Bernabini,²² Anir Bhattacharya,²³ Tobias Boehm,²⁴ Kyohei Boudaeva,²⁵ James Boyd,²⁶ Lotte Brannseur,²⁷ Maurizio Brunaumano,²⁸ Frank Ceballos,²⁹ Marco Champani,³⁰ David W. Casper,³¹ Grigoris Chatzidakis,³² Spencer Chang,³³ Xin Chen,³⁴ Michael L. Cherry,³⁵ James J. Chiriac,³⁶ James M. Cline,³⁷ Ruben Cozzorini,³⁸ Andreia Cristina,³⁹ Matthew Crenn,⁴⁰ Andrea Coccaro,⁴¹ Yoonsu Cui,⁴² Raffaele Tito D'Agosto,⁴³ Mohamad R. Darwish,⁴⁴ Carlos P. de la Hoz,⁴⁵ Patrick deNiverville,⁴⁶ Peter B. Denton,⁴⁷ Albert De Boeck,⁴⁸ Frank F. Dessler,⁴⁹ Jerôme de Winter,⁵⁰ Claudio Dib,⁵¹ Cristina D'Elia,⁵² Monica D'Onofrio,⁵³ Liam Doolerty,⁵⁴ Candice Dunn,⁵⁵ Marco Drewes,⁵⁶ Bhaskar Dutta,⁵⁷ Tamer Eladawy,⁵⁸ Sebastian A. R. Ellis,⁵⁹ Insook Eom,⁶⁰ Giacomo E. Farar,⁶¹ Yasuhiro Farina,⁶² Yusaku Farina,⁶³ Anandoli Feynblat,⁶⁴ Evgeny Filbin,⁶⁵ Jonathan L. Fine,⁶⁶ Dulce Ferreira,⁶⁷ Patrick Filimonov,⁶⁸ Saeed Fomathi Khan,⁶⁹ Jonathan Galt,⁷⁰ Bhik Ganga,⁷¹ Maria V. Garza,⁷² Simon Gao,⁷³ Sofiane Gaspard,⁷⁴ Stephen Gibson,⁷⁵ Francesco Giulii,⁷⁶ Frank Gutzl,⁷⁷ Bhavana Gumber,⁷⁸ Victor P. Gonzalez,⁷⁹ Sergio Gonzalez-Solis,⁸⁰ Yury Gorbenko,⁸¹ Giuliano Gostanin,⁸² Claire Owenka,⁸³ Carl Gwilliam,⁸⁴ Jan Haeghe,⁸⁵ Francis Hahn,^{86, 87} Juan Carlos Hainke,⁸⁸ Christopher S. Hall,⁸⁹ Maria Haver,⁹⁰ Susana D. Haxell,⁹¹ Malena Haver,⁹² Shih-Chieh Han,⁹³ Zhen He,⁹⁴ Pham Q. Hung,⁹⁵ Giuseppe Inghicci,⁹⁶ Philip Kim,⁹⁷ Francesco Isola,⁹⁸ Hiroaki Ishida,⁹⁹ Ayu Ishihara,¹⁰⁰ Akhmed Ismail,¹⁰¹ Insook Ismail,¹⁰² Saou Jalabian,¹⁰³ Yu Seon Jung,¹⁰⁴ Yongsoo Joo,¹⁰⁵ Krzysztof Jodkowski,¹⁰⁶ Ertugrul Kaganbayev,¹⁰⁷ Kevin J. Kelly,¹⁰⁸ Meimin Yu. Khlopov,^{109, 110} Aaley A. Khoo,¹¹¹ Dongjin Kim,¹¹² Jongho Kim,¹¹³ Tapan Kishimoto,¹¹⁴ Erik Kluge,¹¹⁵ Prayog Kumar,¹¹⁶ Anindya Kogut,¹¹⁷ Liang Koo,¹¹⁸ Paque Kwon,¹¹⁹ John Kriamanis,¹²⁰ Susanna Kuehn,¹²¹ Sachita Kulkarni,¹²² Jason Kumar,¹²³ Alexander Kuznetsov,¹²⁴ Krzysztof Kwiatkowski,¹²⁵ Greg Landsberg,¹²⁶ Luca Lavezza,¹²⁷ Rebecca K. Lee,¹²⁸ Ho-Sung Lee,¹²⁹ Hyunsu Leebrun,¹³⁰ Benjamin V. Lehnman,¹³¹ Lorne Levinson,¹³² Ke Li,¹³³ Shirley W. Li,¹³⁴ Shuang Li,¹³⁵ Benjamin Lillard,¹³⁶ Jiating Liu,¹³⁷ Wei Liu,¹³⁸ Zhen Liu,¹³⁹ Steven Loken,¹⁴⁰ Rishi Mariani,¹⁴¹ Chiara Maglietta,¹⁴² Braden Mandy,¹⁴³ Danny Mariani,¹⁴⁴ Inma Masis,¹⁴⁵ Josh McFeyfer,¹⁴⁶ Sam Mehan,¹⁴⁷ Susha Mehta,¹⁴⁸ David W. Miller,¹⁴⁹ Dhanraj Mithal,¹⁵⁰ Venkita A. Misra,¹⁵¹ Rishabh N. Mohapatra,¹⁵² Miroslav Nakamura,¹⁵³ Tevye Nuss,¹⁵⁴ Marco Nunez,¹⁵⁵ Frederick Noonan,¹⁵⁶ Kenry C. Y. Ng,¹⁵⁷ Raj Noh,¹⁵⁸ Satoko Oda,¹⁵⁹ Naohiko Okada,¹⁶⁰ Satomi Okada,¹⁶¹ Yusef Oud,¹⁶² John Osherson,¹⁶³ Hirotoshi Otsuka,¹⁶⁴ Mikaela Overduin,¹⁶⁵ Carlo Pagani,¹⁶⁶ Victoria Paisley,¹⁶⁷ Han Peng,¹⁶⁸ Silvia Pascoli,¹⁶⁹ Seung Cheol Park,¹⁷⁰ Brian Peterson,¹⁷¹ Jeremy A. Peterson,¹⁷² Daoguo Pezou,¹⁷³ Francesco Petropoulos,¹⁷⁴ James L. Pinfold,¹⁷⁵ Markus Pirm,¹⁷⁶ Mikaela Quenkel-Matland,¹⁷⁷ Michael Rajan,¹⁷⁸ Egon Rasch,¹⁷⁹ Frederic E. Reid,¹⁸⁰ Peter Reimke,¹⁸¹ Katy Hill-Ross,¹⁸² Filippo Ronzani,¹⁸³ Adam Rinz,¹⁸⁴ Thomas Rizzo,¹⁸⁵ Tania Roberts,¹⁸⁶ Christopher Roenigk,¹⁸⁷ Jakob Salath-Nyberg,¹⁸⁸ 2021 Osamu Saito,¹⁸⁹ Paolo Scopelliti,¹⁹⁰ Kenneth Schellenberg,¹⁹¹ Matthew Schep,¹⁹² Peter Scherrer,¹⁹³ Manohara Sen,¹⁹⁴ Dipan Sengupta,¹⁹⁵ Anna Sforza,¹⁹⁶ Quaiser Sood,¹⁹⁷ Takashi Suihama,¹⁹⁸ Sushant Saha,¹⁹⁹ Sumanth Shivaji,²⁰⁰ Sharmada Sridhar,²⁰¹ Carl V. Stern,²⁰² Torkel Sjostrand,²⁰³ Yohan Soreng,²⁰⁴ Huiyong Song,²⁰⁵ Alexander Stojanovic,²⁰⁶ John Storer,²⁰⁷ David Stuart,²⁰⁸ Shuang Su,²⁰⁹ Wei Su,²¹⁰ Antoni Szczepaniak,²¹¹ Daisuke Takahashi,²¹² Yoshio Takeda,²¹³

* Contact Information: Jonathan L. Fine (jfine@fnal), Erik Kluge (ekluge@fnal), Stefano Loken

Snowmass Letter of Interest (available [here](#)) ~ 2 pages

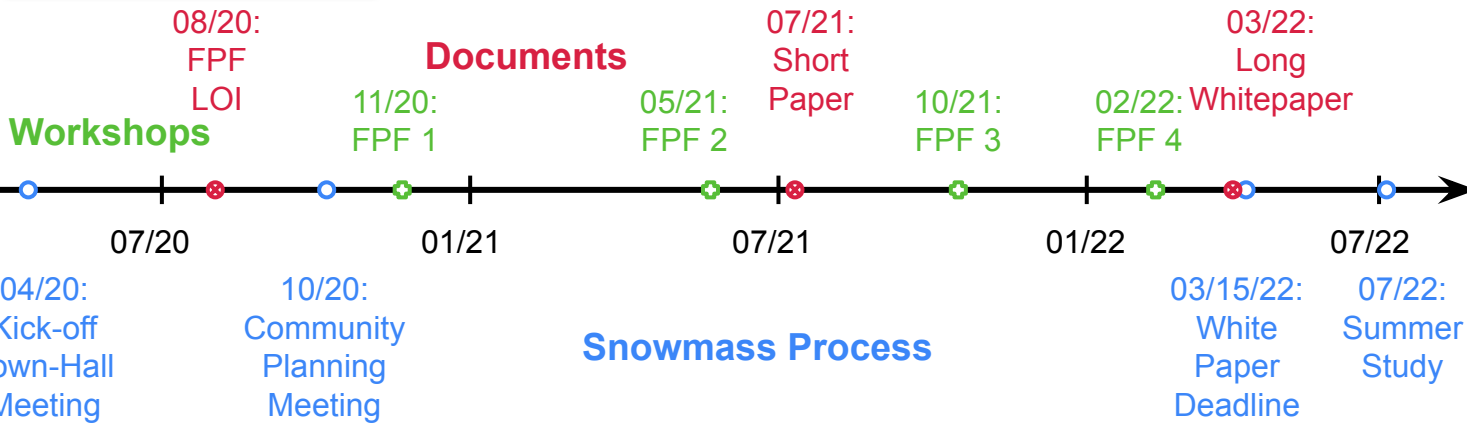
- short outline of idea, many of you have signed it
- not published, not on arXiv

Short Paper ~ 10-20 pages

- first real paper on FPF, to be submitted to arXiv and journal
- essentially a longer version of the LOI
- summary of ideas and reference for further studies

Long Whitepaper ~ 100-200 pages

- collection of detailed individual work on FPF related topics
- essentially a Proposal / Letter of Interest for FPF
- to be submitted to arXiv and journal



FPF Short Paper

Proposed Content

everyone interested in FPF physics
and all FPF workshop participants are
invited to be author and to contribute

outline concept / location of the FPF

proposed experiments and
benchmarks for further studies

short outline of the physics potential for
BSM physics (EF08-EF10)
Neutrino Physics (NF)
QCD and SM Physics (EF05-EF07)
Astroparticle Physics (CF7)

this is just a first proposal - please let
us know about your ideas

for more details, visit the [draft on overleaf](#)

The Forward Physics Facility

Jonathan L. Feng,¹ Felix Kling,² and Maria Vittoria Gazell³

¹*Department of Physics and Astronomy, University of California, Irvine, CA 92697-4575, USA*

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FPF Short Paper

Proposed Strategy

draft is available on overleaf

all participants are invited to contribute
to the writing of the draft

it would be good to have editors for different
sections - if you would like to volunteer or
nominate a colleague within the FPF meetings
participants, please send us an email

we would like to include
contributions from all your FPF related work

Proposed Timeline

05/27-07/01: community contributions

07/01-07/14: editing by editors

07/14-07/21: draft send to community
for feedback

end of July: draft to be submitted

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FPF Short Paper

We created a google form [google form](#) to sign up as author and to express interest to contribute to writing or editing:

https://docs.google.com/forms/d/e/1FAIpQLSdBDNn5UIZjN9xv3a7ZnW5uKIJ8Q0W3sk-M7NkE3-Kbwz1QFA/viewform?usp=sf_link

Please let us know your thoughts and your willingness to contribute!

We will also continue this discussion tomorrow

FPF Short Paper - Author List

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* Erforderlich

name *

Example: Samuel L. Jackson

Meine Antwort

affiliation *

Example: Department of Physics, University of Washington, Seattle, WA 98195-1560, USA

Meine Antwort

email address *

Once editing has finished, we will send it to all authors for feedback and comments before submitting the paper.

Meine Antwort

If you would like to contribute to the writing, please let us know.

Yes

If yes, please select all sections that you would like to contribute to.

Facility / Civil Engineering

Experiments

FPF Long Whitepaper

Proposed Content / Strategy:

summary report on all FPF related work for Snowmass process
all participants are encouraged to submit a few page contribution on their work
similar to the short paper, it would be good to have editors for different sections
this document can also act as proposal / LOI for the FPF

Proposed Timeline:

08/21: create overleaf document after short paper submission
10/26/21: 3rd FPF workshop
02/01/22: 4th FPF workshop
02/07/22: submission deadline for contributions
02/21/22: draft send to community for feedback
03/05/22: draft submitted to arXiv / snowmass
03/15/22: snowmass whitepaper deadline

Please let us know your thoughts and your willingness to contribute

The FPF is a community effort, so your opinion and contribution matters!

We have set up a [google form](#) to sign up as author and to express interest to contribute to writing or editing

We will also continue this discussion tomorrow

If you have any comments that you would like to include us in tomorrow's discussion slides, please send them to us via email:
jlf@uci.edu, felixk@slac.stanford.edu, Maria.Garzelli@mi.infn.it